

being provided on the same semiconductor substrate so that the light emitting active layers lie substantially in parallel to a main surface of the semiconductor substrate,

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said first semiconductor laser resonator being located in a groove including a base and sidewalls, and said second semiconductor laser resonator not being located in said groove; and

a high-resistance region in a sidewall of said groove which is provided between the semiconductor laser resonators, said high-resistance region having sufficient resistance to electrically isolate the first and second semiconductor laser resonators from one another.

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10. (Amended) The semiconductor laser device according to claim 1, wherein the high resistivity region comprises a high resistivity semiconductor layer formed by implanting protons or gallium ions.

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16. (Amended) A semiconductor laser device comprising:
first and second semiconductor laser resonators provided on the same substrate, an active layer of the first laser resonator being of a different material than an active layer of the second laser resonator;
the active layer of the second laser resonator being provided in a groove, whereas the active layer of the first laser resonator is not provided in a groove; and

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a high-resistance region provided at least along a sidewall of the groove in which the active layer of the second laser resonator is provided, the high-resistance region comprising ions and/or protons implanted into the sidewall of the groove.

Please add the following new claims:

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18. (New) The semiconductor laser device of claim 1, wherein each of said first and second semiconductor laser resonators is mounted on a heat sink having a concave portion defined in a surface thereof, each of the semiconductor laser resonators being mounted in a junction-down manner on the heat sink so that in each semiconductor laser resonator a cap layer thereof is located between the heat sink and an active layer thereof, and wherein a sidewall of said groove extends upward from the concave portion defined in the surface of the heat sink.

19. (New) The semiconductor laser device of claim 16, wherein each of said first and second semiconductor laser resonators is mounted on a heat sink having a concave portion defined in a surface thereof, each of the semiconductor laser resonators being mounted in a junction-down manner on the heat sink so that in each semiconductor laser resonator a cap layer thereof is located between the heat sink and an active layer thereof, and so that the active layer of each semiconductor laser resonator is located between said substrate and the heat sink, and wherein a sidewall of said groove extends upward from the concave portion defined in the surface of the heat sink.

20. (New) A semiconductor laser device comprising:

first and second semiconductor laser resonators having different light emitting active layers of materials different from each other, the semiconductor laser resonators being provided on the same substrate so that the light emitting active layers lie substantially in parallel to a main surface of the semiconductor substrate,

an isolating groove defined between the first and second semiconductor laser resonators for electrically isolating the first and second semiconductor laser resonators from one another;

each of said first and second semiconductor laser resonators being mounted on a heat sink having a concave portion defined in a surface thereof, and each of the semiconductor laser resonators being mounted in a junction-down manner on the heat sink so that in each semiconductor laser resonator a cap layer thereof is located between the heat sink and an active layer thereof, and so that the active layer of each semiconductor laser resonator is located between said substrate and the heat sink; and

wherein at least a portion of said isolating groove extends upward from the concave portion defined in the surface of the heat sink.

REMARKS

This is in response to the Office Action dated March 13, 2003. Claims 8-9 have been canceled. New claims 18-20 have been added. Thus, claims 1-7, 10, 11 and 16-20 are now pending. Attached hereto is a marked-up version of the changes made to the